



# Mineral Industry Surveys

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### **COPPER IN OCTOBER 2004**

Mine production in October rose to the highest monthly level since December 2001 owing to increased output from the newly restarted Robinson Mine in Nevada and higher output at several other operations. Quadra Mining Ltd. reported that during October it moved 3.6 million metric tons (Mt) of material at Robinson, processed 840,000 metric tons (t) of ore grading 0.42% copper, and produced concentrate containing about 2,700 t of copper and 42.6 kilograms (1,370 ounces) of gold. The company reported that since startup of milling operations on August 31, it had achieved concentrate grades ranging between 24% and 30% copper and recoveries of 60% to 86% for copper and 35% for gold. The first shipment of concentrate, which left the mine on October 5, was destined for a West Coast port for shipment to an Asian smelter. Quadra anticipated producing 20,000 t of concentrate per month in 2005 (Quadra Mining Ltd., 2004a, b).

Consumption of refined copper fell by more than 6% in October compared with that of September and was down by almost 13% from the August level owing to weak demand at wire-rod mills. This downturn was confirmed by data from the American Bureau of Metal Statistics, Inc., which showed wire-rod production falling by 12% in September. Shipments by domestic producers, however, rose nominally as inventories, which in September had risen to the highest level since 2002, were drawn down. Owing to lower net imports, U.S. apparent consumption of wire rod fell to 157,000 t in October from 165,000 t in September. Year-to-date apparent consumption through October rose to 1.57 Mt, a 9.8% increase compared with consumption in the same period of 2003 (American Bureau of Metal Statistics, Inc., 2004).

According to preliminary data compiled by the International Copper Study Group (2005), including revisions to data for prior months of the year, the global apparent refined copper balance for the first 10 months of 2004 showed a production deficit of 757,000 t. This compares with a production deficit of 405,000 t for the same period of 2003. The drawdown of all reported stocks of refined copper from January through October 2004, 924,000 t, exceeded the calculated production deficit, possibly indicating the movement of material into unreported

merchant or consumer inventories. World refined copper use for the first 10 months of 2004 increased by 5.7% compared with that in the corresponding period of 2003. World refined copper use in October fell by 3.9% from use in September, and on a seasonally adjusted basis it dropped by 6.9%. This was the result of weaker use by the two largest consumers of refined copper, China and the United States.

On the supply side, global mine production of copper increased by 4.5% in the January through October period compared with that of the same period in 2003. Mine output in October 2004 exceeded primary refined output by about 100,000 t, possibly indicating the restocking of depleted inventories of concentrates. (See Copper in September 2004.) Total refined copper production increased by 3.1% in the January through October period compared with that of the corresponding period in 2003—primary refined production rose by 1.8% and secondary refined by 12.9%.

### Undate

On average, copper prices continued to rise in November and December, the COMEX spot price averaging \$1.41 per pound and \$1.46 per pound, respectively. The COMEX price peaked at \$1.54 per pound on December 28 and closed the year at \$1.49 per pound. In December, the Platts Metals Week average NY dealer premium for cathode rose to 5.5 cents per pound over the COMEX spot price and the producer premium rose to about 5.3 cents per pound. This compares with premiums of 3.0 cents per pound and 4.2 cents per pound, respectively, in December 2003. Kennecott Utah Copper Corp. indicated that premiums were likely to continue to rise when it announced that its first quarter 2005 premium for cathode delivery to U.S. locations would rise by between 1.4 cents per pound and 1.7 cents per pound depending on location (Platts Metals Week, 2004).

## **References Cited**

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 $\label{table 1} {\sf TABLE~1}$  SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES  $^1$ 

(Metric tons, unless otherwise specified)

				2004	
	Source				January -
	table <sup>2</sup>	2003 <sup>p</sup>	September	October	October
Production:					
Primary:					
Mine, recoverable	(2)	1,120,000	97,200	103,000	938,000
Refinery:					
Electrolytic:					
Domestic and foreign	(4)	662,000	57,700	57,400	545,000
Electrowon	(4)	591,000	49,800	48,900	487,000
Total	(4)	1,250,000	108,000	106,000	1,030,000
Secondary recoverable copper:					
Refineries	(5)	53,300	4,660	4,540	42,600
Ingot makers <sup>3</sup>	(5)	119,000	9,890	9,890	98,900
Brass and wire-rod mills	(5)	676,000	57,900 <sup>r</sup>	60,400	601,000
Foundries, etc. <sup>3</sup>	(5)	64,600	5,380	5,380	53,800
Smelter, total	(3)	539,000	48,000	49,200	450,000
Consumption:					
Apparent	(8)	2,450,000 °	223,000	NA	NA
Refined (reported)	(7)	2,300,000	204,000 r	191,000	2,050,000
Purchased copper-base scrap	(9)	1,150,000	99,200 <sup>r</sup>	102,000	1,010,000
Stocks at end of period:					
Total refined	(11)	656,000	161,000 <sup>r</sup>	148,000	XX
Blister, etc.	(11)	56,800	71,600	72,200	XX
Prices:					
U.S. producer cathode (cents per pound) <sup>4</sup>	(12)	85.247	136.680	140.273	130.976
Imports: <sup>5</sup>					
Ores and concentrates <sup>6</sup>	(14)	27,100	516	NA	NA
Refined	(14)	882,000	91,700	NA	NA
Exports: <sup>5</sup>					
Ores and concentrates <sup>6</sup>	(15)	9,860	2,330	NA	NA
Refined	(15)	93,300	570	NA	NA

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available. XX Not applicable.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits, except prices; may not add to totals shown.

 $<sup>^2\</sup>mbox{Numbers}$  in parentheses refer to the significant tables where these data are located.

<sup>&</sup>lt;sup>3</sup>Monthly data and 2003 cumulative data estimated based on 2002 monthly average.

<sup>&</sup>lt;sup>4</sup>Source: Platts Metals Week.

<sup>&</sup>lt;sup>5</sup>Source: U.S. Census Bureau.

<sup>&</sup>lt;sup>6</sup>Copper content.

 $\mbox{TABLE 2} \\ \mbox{MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES}^1$ 

	Rec	overable coppe	er		Contained copper	
Period	Arizona	Others <sup>2</sup>	Total	Electrowon	Concentrates <sup>3</sup>	Total
2003: <sup>p</sup>						
January - October	619,000 <sup>r</sup>	310,000	929,000 <sup>r</sup>	495,000 <sup>r</sup>	445,000	940,000 <sup>r</sup>
October	62,300	33,200	95,500	49,600	47,000	96,600
November	60,200	31,800	92,000	46,200	47,000	93,200
December	62,000	33,400	95,300	49,600	46,900	96,500
Year	741,000	375,000	1,120,000	591,000	539,000	1,130,000
2004:	5					
January	58,300	32,300	90,600	48,700	43,200	91,900
February	55,000	29,600	84,600	44,700	41,100	85,800
March	61,300	31,500	92,700	48,400	45,700	94,100
April	55,500	31,600	87,100	47,600	40,700	88,300
May	56,800	34,100	90,900	49,100	42,900	92,000
June	59,200	33,500	92,800	49,400	44,600	94,100
July	62,000	38,100	100,000	50,700	50,900	102,000
August	62,800	36,100	98,900	49,300	51,000	100,000
September	62,800	34,400	97,200	49,800	48,700	98,600
October	64,200	39,200	103,000	48,900	56,200	105,000
January - October	598,000	340,000	938,000	487,000	465,000	952,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

 $\label{eq:table 3} \textbf{COPPER PRODUCED AT SMELTERS IN}$  THE UNITED STATES, BY SOURCE  $^{1,\,2}$ 

# (Metric tons, copper content)

	Anode
Period	production
2003: <sup>p</sup>	
January - October	444,000
October	44,100
November	47,800
December	47,400
Total	539,000
2004:	'-
January	39,700
February	30,100
March	41,300
April	44,400
May	52,900
June	46,500
July	46,500
August	51,300
September	48,000
October	49,200
January - October	450,000

Preliminary.

 $<sup>^{1}\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

 $<sup>^2 \</sup>rm Includes$  production from Alaska, Idaho, Missouri, Montana, Nevada, New Mexico, and Utah.

<sup>&</sup>lt;sup>3</sup>Includes copper content of precipitates and other metal concentrates.

<sup>&</sup>lt;sup>1</sup>Includes blister, anode and copper from primary or secondary sources.

<sup>&</sup>lt;sup>2</sup>Data are rounded to no more than three significant digits; may not add to total shown.

 $\label{eq:table 4} \textbf{TABLE 4}$  PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY  $^1$ 

	Prin	nary materials			
	Electrolytically				Total
Period	refined <sup>2</sup>	Electrowon	Total	Scrap	refined
2003: <sup>p</sup>					
January - October	554,000 <sup>r</sup>	495,000 <sup>r</sup>	1,050,000 <sup>r</sup>	45,200	1,090,000 1
October	53,600	49,600	103,000	4,490	108,000
November	50,500	46,200	96,700	4,050	101,000
December	57,700	49,600	107,000	4,080	111,000
Year	662,000	591,000	1,250,000	53,300	1,310,000
2004:					
January	51,300	48,700	100,000	4,190	104,000
February	50,300	44,700	95,000	3,920	98,900
March	52,300	48,400	101,000	4,330	105,000
April	59,000	47,600	107,000	4,360	111,000
May	55,600	49,100	105,000	4,150	109,000
June	58,900	49,400	108,000	4,460	113,000
July	49,200	50,700	99,900	4,080	104,000
August	53,400	49,300	103,000	3,870	107,000
September	57,700	49,800	108,000	4,660	112,000
October	57,400	48,900	106,000	4,540	111,000
January - October	545,000	487,000	1,030,000	42,600	1,070,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

 ${\it TABLE~5}$  COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASE SCRAP  $^1$ 

# (Metric tons, copper content)

	Refin	eries <sup>2</sup>	Ingot m	akers <sup>3</sup>	Brass and win	e-rod mills	Foundrie	es, etc. <sup>3</sup>	
Period	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	Total <sup>4</sup>
2003: <sup>p</sup>									
January - October	13,300	31,800	23,400 <sup>r</sup>	75,500 <sup>r</sup>	541,000 <sup>r</sup>	26,500 <sup>r</sup>	20,200 r	33,600 <sup>r</sup>	765,000 <sup>r</sup>
October	1,340	3,160	2,340	7,550	56,300	2,880	2,020	3,360	78,900
November	1,340	2,720	2,340	7,550	51,100	2,450	2,020	3,360	72,900
December	1,340	2,740	2,340	7,550	51,900	2,880	2,020	3,360	74,100
Year	16,000	37,300	28,100	90,600	644,000	31,800	24,300	40,300	912,000
2004:									
January	1,340	2,860	2,340	7,550	57,400	3,610	2,020	3,360	80,500
February	1,340	2,590	2,340	7,550	56,600	3,900	2,020	3,360	79,700
March	1,340	3,000	2,340	7,550	60,100	3,650	2,020	3,360	83,400
April	1,340	3,020	2,340	7,550	60,500	2,900	2,020	3,360	83,000
May	1,340	2,820	2,340	7,550	54,600	3,090	2,020	3,360	77,100
June	1,340	3,120	2,340	7,550	55,900	2,910	2,020	3,360	78,500
July	1,340	2,740	2,340	7,550	56,400	2,440	2,020	3,360	78,200
August	1,340	2,540	2,340	7,550	56,800 <sup>r</sup>	2,450	2,020	3,360	78,400 <sup>r</sup>
September	1,340	3,320	2,340	7,550	55,200 <sup>r</sup>	2,690	2,020	3,360	77,800 <sup>r</sup>
October	1,340	3,210	2,340	7,550	57,700	2,670	2,020	3,360	80,200
January - October	13,400	29,200	23,400	75,500	571,000	30,300	20,200	33,600	797,000

Preliminary. Revised.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>From domestic and foreign source materials.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Electrolytically refined and fire-refined scrap based on source of material at smelter level.

<sup>&</sup>lt;sup>3</sup>Monthly data and 2003 cumulative data estimated based on 2002 annual data.

<sup>&</sup>lt;sup>4</sup>Does not include an estimate, based on reported 2002 data of 3,100 tons per month from new scrap and 2,020 tons per month of copper recovered from scrap other than copper-base.

 ${\bf TABLE~6}$  PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD SEMIFABRICATES  $^1$ 

(Metric tons, gross weight)

	Pro	duction	Ship	oments	Stocks, e	nd of period
Period	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills
2003: <sup>p</sup>						
January - October	1,140,000	1,360,000 <sup>r</sup>	1,140,000	1,370,000 <sup>r</sup>	XX	XX
October	120,000	156,000	119,000	159,000	54,000	21,600
November	110,000	139,000	111,000	136,000	53,500	24,700
December	106,000	131,000	106,000	134,000	53,800	22,200
Year	1,360,000	1,630,000	1,360,000	1,640,000	XX	XX
2004:						
January	115,000	158,000	116,000	151,000	52,400	29,400
February	117,000	146,000	120,000	147,000	52,200	28,500
March	123,000	158,000	124,000	168,000	51,300	19,100
April	125,000	159,000	124,000	160,000	52,400	18,300
May	115,000	160,000	115,000	148,000	51,400	29,600
June	118,000	143,000	116,000	148,000	52,700	23,900
July	117,000	143,000	116,000	144,000 <sup>r</sup>	54,100	23,900
August	118,000	162,000 <sup>r</sup>	118,000	156,000 <sup>r</sup>	54,700	29,500 <sup>r</sup>
September	112,000	154,000 <sup>r</sup>	112,000 <sup>r</sup>	148,000 <sup>r</sup>	54,500 <sup>r</sup>	35,400 <sup>r</sup>
October	118,000	135,000	119,000	148,000	53,500	22,600
January - October	1,180,000	1,520,000	1,180,000	1,520,000	XX	XX

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised. XX Not applicable.

 $\label{eq:table 7} \text{CONSUMPTION OF REFINED COPPER}^1$ 

### (Metric tons)

	Brass	Wire-rod	Other	
Period and item	mills	mills	plants <sup>2</sup>	Total
2003: <sup>p</sup>			•	
January - October	490,000 <sup>r</sup>	1,370,000 <sup>r</sup>	56,300 <sup>r</sup>	1,920,000
October	49,500	157,000	5,630	212,000
November	49,600	140,000	5,630	195,000
December	46,900	128,000	5,630	181,000
Year	587,000	1,640,000	67,600	2,300,000
2004:				
January	47,900	156,000	5,630	210,000
February	49,600	146,000	5,630	201,000
March	54,300	158,000	5,630	218,000
April	52,400	158,000	5,630	216,000
May	45,300	156,000	5,630	207,000
June	46,000	136,000	5,630	188,000
July	50,900	142,000 <sup>r</sup>	5,630	199,000 <sup>r</sup>
August	48,500	165,000 <sup>r</sup>	5,630	219,000 <sup>r</sup>
September	46,100 r	152,000 <sup>r</sup>	5,630	204,000 r
October:				
Cathodes	32,600	137,000	818	170,000
Wire bars			(3)	(3)
Ingots and ingot bars	1,510		2,230	3,740
Cakes and slabs	(3)		(3)	(3)
Billets and other	14,000	W	2,580	16,600
Total	48,200	137,000	5,630	191,000
January - October	489,000	1,510,000	56,300	2,050,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data included with "Cathodes." -- Zero.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Consumption by ingot makers, chemical plants, foundries, and miscellaneous manufacturers is estimated based on 2002 annual data.

<sup>&</sup>lt;sup>3</sup>Withheld to avoid disclosing company proprietary data; included with "Billets and others."

 $\label{eq:table 8} \textbf{U.S.} \ \textbf{APPARENT CONSUMPTION OF COPPER}^1$ 

Period	Refined copper production	Copper in old scrap <sup>2</sup>	Refined general imports <sup>3</sup>	Refined	Stock change during period	Apparent consumption
	production	old scrap	imports	exports <sup>3</sup>	during period	consumption
2003: <sup>p</sup>						
January - September	946,000 <sup>r</sup>	169,000 <sup>r</sup>	498,000	57,800	(287,000) <sup>r</sup>	1,840,000 <sup>r</sup>
September	108,000	18,600	46,000	4,330	(30,600)	198,000
October	103,000	19,000	69,100	4,640	(58,300)	245,000
November	96,700	18,100	63,300	8,470	(24,400)	194,000
December	107,000	18,600	57,200	22,300	(11,000)	172,000
Year	1,250,000	224,000 <sup>r</sup>	687,000 <sup>r</sup>	93,300 <sup>r</sup>	(381,000) <sup>r</sup>	2,450,000 <sup>r</sup>
2004:						
January	100,000	19,400	43,700	11,000	(77,100)	229,000
February	95,000	19,400	45,400	18,500	(63,600)	205,000
March	101,000	19,600	62,500	23,900	(75,100)	234,000
April	107,000	18,900	54,100 <sup>r</sup>	28,400	(93,800)	245,000 <sup>r</sup>
May	105,000	18,800	56,300	3,700	(40,300)	216,000
June	108,000	19,000	40,400	2,720	(62,300)	227,000
July	99,900	18,100	75,600	5,470	(24,200)	212,000
August	103,000	17,900	65,500	9,350	(34,800) <sup>r</sup>	212,000 <sup>r</sup>
September	108,000	18,900	73,800	570	(23,200) <sup>r</sup>	223,000
October	106,000	18,800	NA	NA	(12,700)	NA
January - September	925,000	170,000	517,000	104,000	(494,000)	2,000,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available.

 ${\it TABLE~9} \\ {\it CONSUMPTION~OF~PURCHASED~COPPER-BASE~SCRAP}^1$ 

# (Metric tons, gross weight)

	Smel	lters			Brass	and			
	and ref	ineries	Ingot m	akers <sup>2</sup>	wire-rod	$mills^3$	Foundrie	s, etc. <sup>2</sup>	Total scrap
Period	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	used
2003: <sup>p</sup>									
January - October	13,500	32,300	34,900 r	107,000 r	679,000 <sup>r</sup>	27,100 r	35,300 <sup>r</sup>	37,300 <sup>r</sup>	966,000 <sup>r</sup>
October	1,350	3,180	3,490	10,700	70,800	2,990	3,530	3,730	99,800
November	1,350	2,560	3,490	10,700	64,000	2,550	3,530	3,730	91,900
December	1,350	2,760	3,490	10,700	65,200	2,980	3,530	3,730	93,700
Year	16,200	37,600	41,900	128,000	808,000	32,600	42,300	44,800	1,150,000
2004:	- (								
January	1,350	2,880	3,490	10,700	71,900	3,730	3,530	3,730	101,000
February	1,350	2,610	3,490	10,700	70,800	4,020	3,530	3,730	100,000
March	1,350	3,020	3,490	10,700	75,900	3,760	3,530	3,730	105,000
April	1,350	3,050	3,490	10,700	75,400	2,930	3,530	3,730	104,000
May	1,350	2,770	3,490	10,700	68,500	3,200	3,530	3,730	97,300
June	1,350	3,150	3,490	10,700	70,900	3,040	3,530	3,730	99,800
July	1,350	2,760	3,490	10,700	71,100	2,620	3,530	3,730	99,300
August	1,350	2,550	3,490	10,700	72,600	2,580	3,530	3,730	101,000
September	1,350	3,290	3,490	10,700	70,300 <sup>r</sup>	2,820	3,530	3,730	99,200 <sup>r</sup>
October	1,350	3,230	3,490	10,700	73,000	2,810	3,530	3,730	102,000
January - October	13,500	29,300	34,900	107,000	720,000	31,500	35,300	37,300	1,010,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes reported monthly production of copper from old scrap of copper-base, an estimate for annual reporters, and a monthly average of copper from non-copper-base materials based on 2002 data.

<sup>&</sup>lt;sup>3</sup>Source: U.S. Census Bureau.

 $<sup>^{1}\</sup>mathrm{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

 $<sup>^2\!</sup>M\!$  Onthly data and 2003 cumulative data estimated from 2002 annual data.

<sup>&</sup>lt;sup>3</sup>Consumption at brass and wire-rod mills assumed equal to receipts.

 $\label{table 10} {\tt CONSUMPTION\ OF\ PURCHASED\ COPPER-BASE\ SCRAP^{1,\,2}}$ 

(Metric tons, gross weight)

	2003 <sup>p</sup>				2004	
Scrap type and processor	January - October	Year	August	September	October	January - October
No. 1 wire and heavy:						
Smelters and refiners	56,000 <sup>r</sup>	67,200	5,610	5,610	5,610	56,100
Brass and wire-rod mills	316,000 <sup>r</sup>	377,000	31,100	30,900 r	33,500	334,000
No. 2 mixed heavy and light:	-					
Smelters and refiners	25,600 <sup>r</sup>	29,500	1,870	2,600	2,550	22,500
Brass and wire-rod mills	4,830	5,750	440	411	327	5,430
Total unalloyed scrap:						
Smelters and refiners	81,600 <sup>r</sup>	96,800	7,480	8,220	8,160	78,600
Brass and wire-rod mills	321,000 <sup>r</sup>	383,000	31,600	31,400 <sup>r</sup>	33,800	340,000
Red brass: <sup>3</sup>						
All plants	35,400 <sup>r</sup>	42,600	3,830	3,740	3,810	37,800
Leaded yellow brass:	<del>-</del>					
All plants	257,000 <sup>r</sup>	306,000	29,500	28,200	28,700	279,000
Yellow and low brass:	-					
All plants	41,600 <sup>r</sup>	49,400	3,320	3,360	3,330	33,400
Cartridge cases and brass:	-					
All plants	67,700 <sup>r</sup>	79,400	7,660	7,590	7,530	72,300
Auto radiators:	<u>-</u>					
Smelters and refiners	26,100 <sup>r</sup>	31,400	2,610	2,610	2,610	26,100
Bronzes:	<del>-</del>					
Smelters and refiners	6,730 <sup>r</sup>	8,070	672	672	672	6,720
Brass mills	4,470	5,390	472	536 <sup>r</sup>	486	5,330
Nickel-copper alloys:	=					
All plants	13,800 <sup>r</sup>	16,400	2,150	1,730 °	1,490	17,600
Low grade and residues:	-					
Smelters and refiners	8,800 r	10,600	880	880	880	8,800
Other alloy scrap: <sup>4</sup>	-					
Smelters and refiners	2,510 <sup>r</sup>	3,010	251	251	251	2,510
Brass mills	3,360	4,110	476	332 г	332	4,190
Total alloyed scrap:						
Smelters and refiners	81,700 <sup>r</sup>	98,000	8,170	8,170	8,170	81,700
Brass mills	386,000	458,000	43,700	41,700 <sup>r</sup>	42,000	412,000
Total scrap:						
Smelters and refiners	163,000 <sup>r</sup>	195,000	15,600	16,400	16,300	160,000
Brass and wire-rod mills	706,000	841,000	75,200	73,100 <sup>r</sup>	75,800	752,000
DD 1: . ID . 1						

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>&</sup>lt;sup>1</sup>Does not include: consumption by foundries, chemical plants, and miscellaneous manufacturers, estimated to total about 7,240 tons of scrap per month based on 2002 annual data; monthly data include estimates of about 14,200 tons of scrap per month consumed by ingot makers.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>3</sup>Includes composition turnings, silicon bronze, zincy bronze, railroad car boxes, cocks and faucets, gilding metal, and commercial bronze.

<sup>&</sup>lt;sup>4</sup>Includes refinery brass, beryllium copper, phosphor copper, and aluminum bronze.

TABLE 11 COPPER STOCKS AT END OF PERIOD  $^{1}$ 

				Refi	ned copper			
	Crude		Wire-rod					Total
Period	copper <sup>2</sup>	Refineries <sup>3</sup>	$mills^3$	Brass mills <sup>3</sup>	Other <sup>4</sup>	Comex <sup>5</sup>	$LME^6$	refined
2003: <sup>p</sup>								
October	51,700	3,590	23,200	14,700	3,600	267,000	379,000	691,000
November	57,500	6,960	20,900	19,500	3,600	262,000	353,000	667,000
December	56,800	12,100	29,700	20,200	3,600	255,000	335,000	656,000
2004:								
January	49,900	9,840	22,500	12,500	3,600	239,000	291,000	578,000
February	48,100	10,100	25,200	16,300	3,600	219,000	240,000	515,000
March	43,200	10,800	30,700	14,200	3,600	213,000	167,000	440,000
April	62,900	8,510	19,100	16,700	3,600	172,000	126,000	346,000
May	69,100	11,100	27,500	18,000	3,600	132,000	114,000	306,000
June	60,600	5,680	26,600	19,600	3,600	95,100	92,800	243,000
July	62,200	6,780	29,700 <sup>r</sup>	19,100	3,600	79,000	80,800	219,000 <sup>r</sup>
August	65,700	8,640	21,400 <sup>r</sup>	22,600	3,600	61,600	66,400	184,000 <sup>r</sup>
September	71,600	7,830	16,200 <sup>r</sup>	24,900 <sup>r</sup>	3,600	49,500	59,000	161,000 <sup>r</sup>
October	72,200	9,210	26,200	20,300	3,600	45,500	43,400	148,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

TABLE 12 AVERAGE PRICE OF COPPER IN THE UNITED STATES AND ON THE LONDON METAL EXCHANGE

# (Cents per pound)

	U.S. producers	Comex	LME
	delivered price	first	cash price
Period	cathode1	position <sup>2</sup>	Grade A
2003:			
October	92.290	88.104	87.099
November	96.867	92.681	93.215
December	103.917	99.731	99.831
Year	85.247	81.050	80.684
2004:	_		
January	114.336	110.150	109.911
February	129.302	125.116	125.144
March	138.323	134.137	136.439
April	133.646	128.481	133.694
May	126.097	120.968	123.960
June	126.008	120.862	121.832
July	132.078	126.812	127.342
August	133.015	127.752	129.064
September	136.680	131.414	131.283
October	140.273	135.007	136.575
January - October	130.976	126.070	127.524

<sup>&</sup>lt;sup>1</sup>Listed as "U.S. producer cathode."

Sources: Platts Metals Week and American Metal Market.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Copper content of blister and other materials in transit and in process of refining.

<sup>&</sup>lt;sup>3</sup>Stocks of refined copper as reported; no estimates are made for nonrespondents.

<sup>&</sup>lt;sup>4</sup>Monthly estimates based on reported and 2002 annual data, comprising stocks at ingot makers, chemical plants, foundries, and miscellaneous manufacturers.

<sup>&</sup>lt;sup>5</sup>Commodity Exchange Inc., New York.

<sup>&</sup>lt;sup>6</sup>London Metal Exchange Ltd., U.S. warehouses.

<sup>&</sup>lt;sup>2</sup>Listed as "Comex high grade first position."

 ${\it TABLE~13}$  NEW YORK AVERAGE BUYING PRICES FOR COPPER SCRAP

(Cents per pound)

			Dealers (N	Vew York)
		•		Red brass
	Brass mills	Refiners	No. 2	turnings and
Month	No. 1 scrap	No. 2 scrap	Scrap	borings
2003:				
October	87.09	77.89	55.18	38.00
November	92.22	82.81	59.44	38.44
December	98.76	89.69	67.00	46.00
Year	80.17	70.42	52.70	38.65
2004:				
January	108.80	98.38	72.60	50.20
February	124.08	112.66	75.84	52.37
March	132.89	118.57	91.00	60.30
April	127.30	107.18	90.91	58.82
May	119.65	96.28	89.00	55.00
June	119.82	96.55	89.00	55.00
July	125.52	101.33	89.00	55.00
August	126.64	101.73	89.00	55.00
September	127.29	106.19	89.00	55.00
October	130.43	113.38	89.00	55.00
January - October	124.24	105.23	86.44	55.17

Source: American Metal Market.

 ${\it TABLE~14}$  U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS  $^1$ 

(Metric tons, copper content)

	Ore and concentrate			Matte,	Matte, ash and precipitates			ister and anode	es	Refined		
		2004			2004			2004			2004	
Country or			January -		January -			January -				January -
territory	2003	September	September	2003	September	September	2003	September	September	2003	September	September
Brazil							(2)			11,800	3,070	4,570
Canada	86	516	516	187	38	76	83,600	6,870	55,400	218,000	23,800	199,000
Chile	4,940						45,200	5,420	31,200	348,000	41,200	248,000
Germany				59						8,530	3,680	17,300
Japan							(2)		19	5,020	313	3,460
Mexico	22,000		22,400	501	17	172	10,200	1,010	6,240	21,600	3,430	12,200
Namibia							17,700		7,710			
Peru							5	2,020	3,530	258,000	16,200	125,000
Taiwan				699	127	899						(2)
United Kingdom							2		3	10,100		27
Other				54		34	23		2	1,220	17	368
Total	27,100	516	22,900	1,500	182	1,180	157,000	15,300	104,000	882,000	91,700	611,000

<sup>--</sup> Zero

Source: U.S. Census Bureau.

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<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Less than 1/2 unit.

 $\label{eq:table 15} \text{U.s. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS}^1$ 

(Metric tons, copper content)

	Ore and concentrate			Matte, ash and precipitates			Bli	ister and anode	es	Refined		
		20	2004		2,004			2004		-	2004	
Country or			January -			January -			January -			January -
territory	2003	September	September	2003	September	September	2003	September	September	2003	September	September
Belgium	87		6	39		6		104	620	2		998
Canada	7,540	898	15,700	6,740	1,900	14,400	17,200	1,410	18,600	2,100	77	1,450
China	1,380	1,400	1,820	153		52	567	20	267	71,600		19,300
Costa Rica				3			1			254		1,300
Germany			32	(2)		18	441	170	782	185		64
Hong Kong	27		186	74		12	2,650	273	2,620	52	4	7
India			56	175		20	118		119	1,370	104	2,330
Italy				5			219	19	116	81		21,100
Japan	107		2,460	40		55	85	226	666	251		49
Korea, Republic of			2	12		6	788	17	5,680	742	17	3,240
Mexico	224	1	115	8,090	207	2,230	252	70	117	12,200	337	14,200
Saudi Arabia										28		7,840
Singapore	6			4	14	18	478	60	529	71		39
Taiwan	11		96			5	1,270	100	998	3,630	6	28,500
United Arab Emirates	4		5	4		5	503	166	669	4		
United Kingdom	41	2	15	77	11	70	430	48	365	42	5	569
Other	438	23	360	219	16	232	1,120	158	1,740	749	20	2,510
Total	9,860	2,330	20,800	15,600	2,150	17,100	26,100	2,840	33,900	93,300	570	104,000

Revised. -- Zero.

Source: U.S. Census Bureau.

 $<sup>^{1}\</sup>mbox{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Less than 1/2 unit.

TABLE 16
U.S. COPPER SCRAP TRADE<sup>1</sup>

(Metric tons, gross weight)

			Impo	rts		Exports						
	Unalloyed			Alloyed				Unalloyed		Alloyed		
		2004			2004			20	004		2004	
Country or			January -			January -			January -			January -
territory	2003	September	September	2003	September	September	2003	September	September	2003	September	September
Belgium				46			2,630	156	2,730	6,010	522	6,120
Canada	4,130	547	4,440	37,300	3,600	33,500	21,200	2,910	24,500	17,500	1,300	10,400
China				824	93	344	225,000	20,300	159,000	245,000	19,000	176,000
Costa Rica	921	104	997	404	65	364				6		
Dominican Republic	1,100	18	432	766	17	319				4		
El Salvador	62	58	520	468	8	193						
Germany	19		2	5,250		1,100	7,900	526	6,130	7,680	1,400	9,660
Guatemala	474	9	264	869	130	713						
Honduras	534	144	898	488	36	472						
Hong Kong			(2)				2,530	211	3,500	9,600	1,000	8,440
India				18			5,550	407	3,740	45,400	4,290	37,100
Japan	77	6	55	261		63	6,790	635	5,820	9,110	658	7,300
Korea, Republic of				21			25,400	2,050	18,900	15,500	898	12,900
Malaysia				272	51	164	3,620	25	458	88		44
Mexico	9,950	1,040	7,670	18,700	1,990	17,000	3,200	218	3,700	808	156	1,220
Taiwan				462	46	1,430	8,500	865	8,210	6,860	809	10,900
United Kingdom	278	80	413	781	57	802	97		20	857	394	3,550
Venezuela	159	27	217	957	48	220			72			
Other	1,900	63	1,100	3,100	383	3,040	2,940	306	1,610	9,070	984	8,490
Total	19,600	2,090	17,000	71,000	6,520	59,700	316,000	28,600	238,000	373,000	31,400	292,000

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Less than 1/2 unit.